REMARKS

Reconsideration and further examination of this application is respectfully requested. Claims 4-6 and 9 were previously cancelled. Claims 1, 7, 10, 11, 14, and 17 were previously amended. Claims 7, 10, 11, 14, and 17 have been further amended to correct matters of form. Claims 7, 14, and 17 have also been further amended to clarify the meaning of the claims. Claims 2, 3, 8, 12, 13, 15, and 16 are presented in original form. Therefore, Applicants submit claims 1-3, 7, 8, and 10-17 for further examination.

Claims 7, 10, 11, 14, and 17 have been amended to correct matters of form. Claims 7, 10, 11, 14, and 17 have been amended to replace appropriate instances of the word "the" with the word "said" to maintain a single grammatical style for the claims. Neither use of the word "the" nor the word "said" is improper, but Applicants feel the use of a single style is more appropriate. Claims 7, 14, and 17 have also been amended to correct an additional matter of form by replacing the pronoun "them" with the specific item being referenced. Therefore, claims 7, 14, and 17 now read "replacing commands of said computer operating system with commands of a multiple-path driver and sending *said commands of said multiple-path driver* to a virtual host bus adapter driver" instead of "replacing commands of said computer operating system with commands of a multiple-path driver and sending *them* a virtual host bus adapter driver," *emphasis added*. Additionally, claim 17 inadvertently included the phrase "diverting device commands from said computer operating system" from the original claim 17 in the claim amendments for claim 17 as part of prior Amendment A. Applicants have removed the inadvertently included phrase from claim 17. The above amendments are all directed to a matter of form and do not change the substance of the claims. Entry of the above matter of form amendments is proper since the amendments place the claim in better condition for appeal by correcting the form of the claims, and according to 37 C.F.R. 1.116(b)(2) "[a]mendments presenting rejected claims in better form for consideration on appeal may be admitted."

Claims 7, 14, and 17 are further amended to clarify the meaning of the claim. The fourth element of claims 7, 14, and 17 address similar claim limitations. To clarify the limitations in the claims, Applicants have amended claims 7, 14, and 17 to include the phrase "such that said computer data storage devices are selectively presented to said computer operating system of said host computer as a single virtual computer storage device" at the end of the fourth element of the claims. A similar phrase has been included in the original and all subsequent amended versions of

claim 1. The addition of the phrase at the end of the fourth element of claims 7, 14, and 17 merely clarifies the meaning of the claims as the claims already stated "a multiple-path driver that transmits data along multiple physical paths between said host computer and said <u>computer data storage devices</u> by intercepting device commands from said computer operating system, replacing commands of said computer operating system with commands of said multiple-path driver and sending said commands of said multiple-path driver to <u>a virtual host bus adapter driver</u>." That is, commands for the plural computer storage devices are replaced and sent to the singular virtual host bus adapter driver. Lines 17-23 on page 6 of the specification of the subject patent application state:

> "The result of replacing the SD and SG device driver references with references to the multiple-
> path driver is that the operating system will now only see the multiple-path driver's creation of a
> single virtual (non-physical) data storage device, no matter how many different physical paths to
> the data storage devices are available. Since a computer system works best when seeing one data
> storage device, the operating system may continue optimum performance no matter how many
> physical paths to data storage devices are added to the computer system."

Further, lines 28-30 on page 7 of the subject patent application state: "The computer system sees the virtual host bus adapter driver 424 as the only available data storage device." Thus, when read in light of the specification, claims 7, 14, and 17 included the limitation of the phrase "such that said computer data storage devices are selectively presented to said computer operating system of said host computer as a single virtual computer storage device" and the addition of the phrase to the claims merely clarifies the meaning of the claims, but does not add additional limitations to the claims. Therefore, entry of the above single virtual computer storage device amendments to claims 7, 14, and 17 is proper since the amendments place the claim in better condition for appeal by clarifying the meaning of the claims, and according to 37 C.F.R. 1.116(b)(2) "[a]mendments presenting rejected claims in better form for consideration on appeal may be admitted." Further, entry of the above single virtual computer storage device amendments to claims 7, 14, and 17 is also proper under 37 C.F.R. 1.116(b)(3) which states: "An amendment touching the merits of the application or patent under reexamination may be admitted upon a showing of good and sufficient reasons why the amendment is necessary and was not earlier presented." Since the Examiner rejected the claims on new grounds in the final office action and this is the first chance Applicants have had to respond to the new grounds given by the Examiner, Applicants have good and sufficient reason to enter the amendments.

In the subject Office Action, the Examiner rejected claims 1, 2, 7, 8, and 12-17 under 35 U.S.C. 103(a) as being unpatentable over Do et al. (US PGPub No. 2004/0172636) in view of Stauffer et al. (USPN 6809735). The Examiner further rejected claims 3, 10, and 11 under 35 U.S.C. 103(a) as being unpatentable over Do et al. in view of Iwatani (US PGPub No. 2002/0023151). Applicants wish to note that claims 10 and 11 were not explicitly rejected in the heading of the rejection, but were later noted as rejected for the same reasons as for claim 3. Applicants also wish to note that claims 3, 10, and 11 are dependent claims of either claim 1 or claim 7, both claims for which the Examiner included the Stauffer et al. reference as the basis for a 35 U.S.C. 103(a) rejection. Thus, Applicants interpret the Examiner's rejection of claims 3, 10, and 11 under 35 U.S.C. 103(a) as being unpatentable over Do et al. in view of Stauffer et al. and further in view of Iwatani.

The Examiner stated that Fig. 2b and/or paragraph 0041 of Do et al. disclose the limitation of claim 1 which states: "selectively presenting said <u>computer data storage devices</u> to said upper-level drivers of said operating system of said host computer <u>as a single virtual computer data storage device</u>," *emphasis added*. Paragraph 0041 of Do et al. states:

> "Fig. 2b illustrates an actual configuration 200b of a host interface according to the present invention. <u>The devices 260, 270, as shown in Fig. 2a, are in fact the same device 280.</u> The connections 240, 250 are actually multiple paths to the same device 280. Accordingly, in order to create multi-path configurability, it is necessary to add a virtual device controller with an additional device driver layer to the device I/O driver architecture. This additional device driver layer will recognize devices with multiple access paths 240, 250 and treat them as connecting to a single device 280." *Emphasis added.*

Thus, Do et al. discloses showing a single device with multiple communication paths as a single device. Fig. 2b and/or paragraph 0041 of Do et al. do not address the presentation of multiple physical devices with multiple communication paths to the operating system as a single virtual data storage device. Paragraph 0047 of Do et al. states: "the virtual bus driver 420 will create a virtual disk device for every physical disk connected to a host and exposes this physical disk to the OS 405." Thus, Do et al. specifically teaches away from presenting computer storage devices to the computer operating system as a single virtual computer data storage device by explicitly stating that each physical hard drive will be represented by a separate virtual disk device.

Neither Stauffer et al. nor Iwatani make up for the deficiencies of Do et al. Stauffer et al. discloses graphical command strings where tokenized commands are created by substituting the

token for the memory address. Iwatani discloses physically connecting devices to multiple communications paths. Thus, neither Stauffer et al. nor Iwatani address presenting a single virtual computer data storage device to the computer operating system in place of computer data storage devices with multiple communication paths.

For the above stated reasons, Do et al. does not disclose, teach, or suggest claim 1 of the presently claimed invention as Do et al. teaches away from claim 1 of the presently claimed invention. Further, neither Stauffer et al. nor Iwatani make up for the deficiencies of Do et al. Therefore, the combination of Do et al. with either Stauffer et al. or Iwatani is improper under 35 U.S.C. 103(a) and claim 1 is in condition for allowance. As amended independent claims 7, 14, and 17 have similar limitations to claim 1. Thus, the rejections of claim 7, 14, and 17 under 35 U.S.C. 103(a) are also improper for the same reasons as set forth for claim 1. Claims 2, 3, 8, 10-13, 15, and 16 are dependent claims depending from independent parent claims 1, 7, or 14. Therefore, dependent claims 2, 3, 8, 10-13, 15, and 16 are not rendered obvious under 35 U.S.C. 103(a) since the independent parent claims 1, 7, and 14 are not rendered obvious by the prior art.

For these reasons, claims 1-3, 7, 8, and 10-17 are proper and are considered to be patentable over the prior art. Therefore, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Dated this 18th day of June, 2007.

COCHRAN FREUND & YOUNG LLC

By: _____

Christopher P. Whitham   #53,769
Agent for Applicants
2026 Caribou Drive, Suite 201
Fort Collins, CO 80525
(970) 492-1100
Fax: (970) 492-1101